NORTHGATE EXPLORATION LIMITED

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ANNUAL REPORT
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Northgate Exploration Limited

1974 Annual Report

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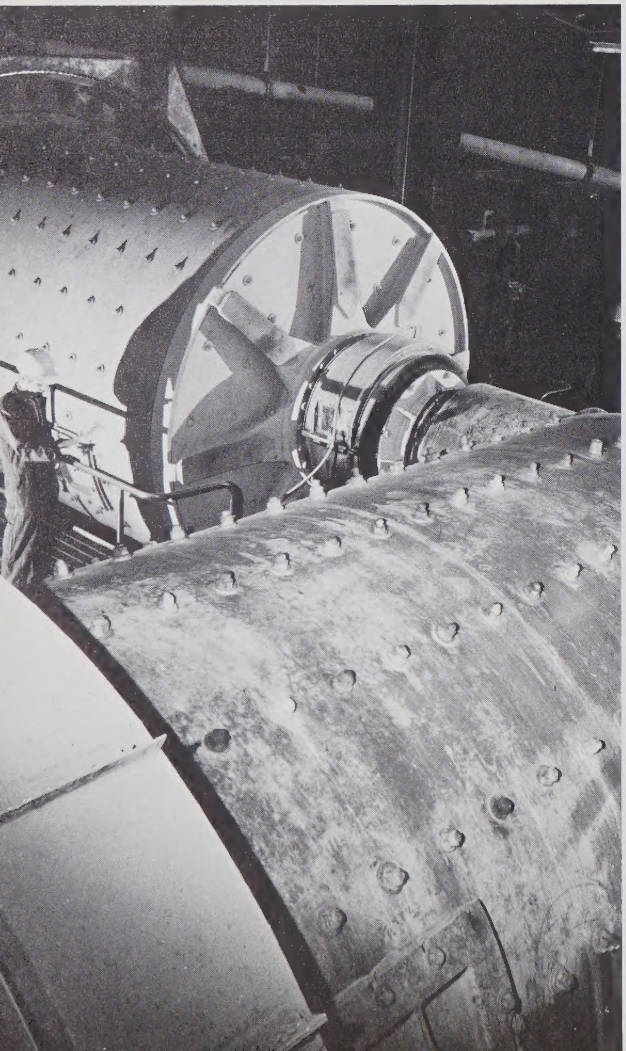
A view looking across the tailings pond of the surface plant at the Tynagh Mine, County Galway, Ireland. From left to right, the principal structures are the shaft headframe, coarse ore storage bin, dense media separation plant and the concentrator complex.



Foreword

Northgate Exploration Limited is a mining and exploration company with main operations in the Republic of Ireland. Its two principal wholly owned Irish subsidiaries are Irish Base Metals Limited operating the Tynagh lead-zinc-silver mine at Tynagh, County Galway, and Gortdrum Mines (Ireland) Limited operating the copper-silver mine at Gortdrum, County Tipperary. The principal products of the Tynagh Mine are lead and zinc concentrates, some of which contain payable quantities of by-product copper and silver. These concentrates are shipped to various European smelters.

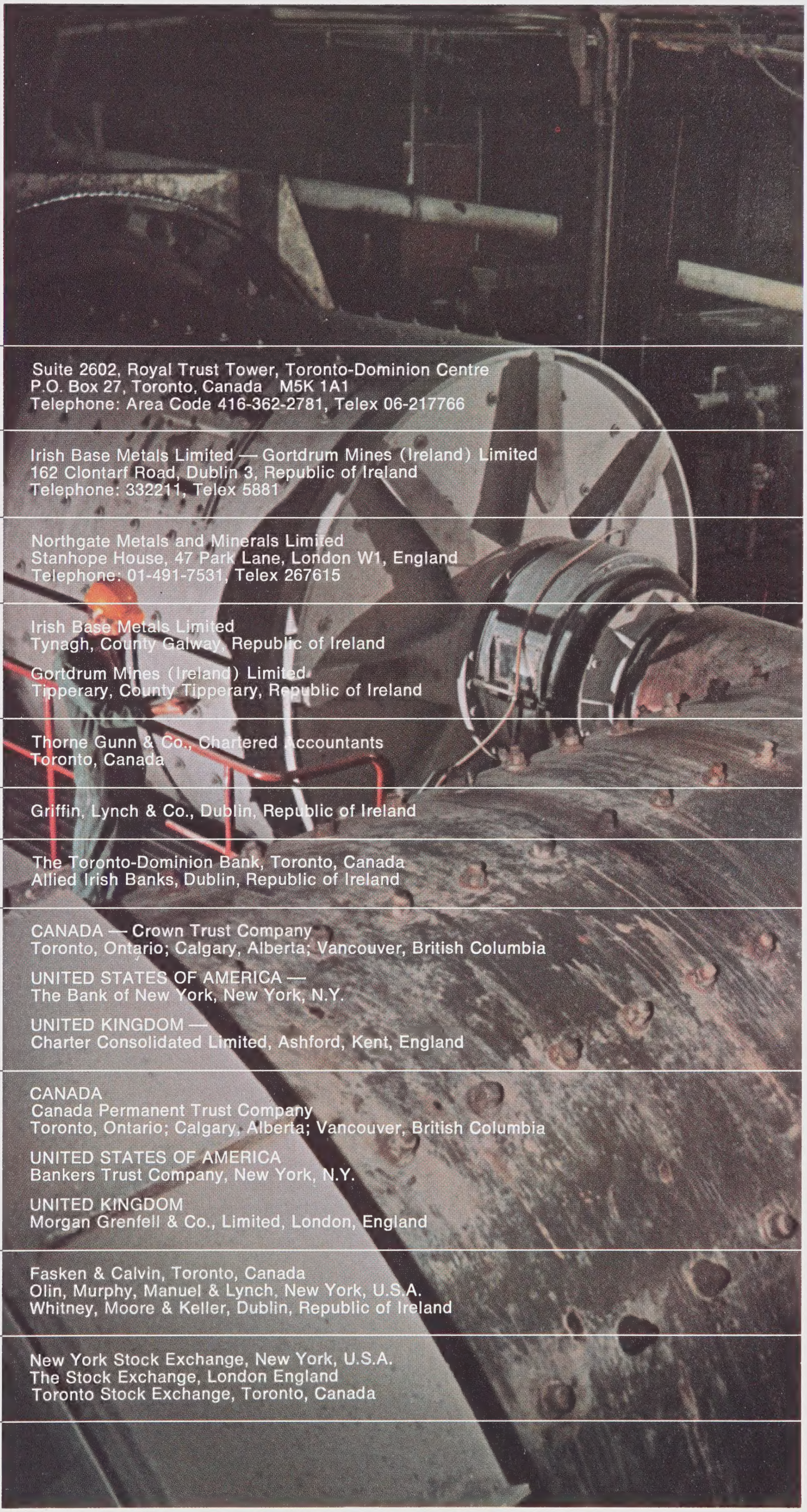
The principal products of the Gortdrum Mine are silver bearing copper concentrates and mercury metal, the latter being produced as a by-product. The concentrates are principally shipped to a smelter in Spain and the mercury is sold to various firms.

Northgate, through its various wholly owned Irish subsidiary companies, maintains an active exploration program throughout the Republic of Ireland and holds a total of 181 prospecting licences covering an area of approximately 2,500 square miles. In addition it is participating in the exploration of 11 prospecting licences with other companies. The annual budget for exploration in the past few years has been in the order of some $500,000.

Northgate has a number of affiliated companies, principally Anglo United Development Corporation Limited, Westfield Minerals Limited and Whim Creek Consolidated N.L., which provide a wide exposure to exploration and mine development in other countries in addition to Ireland, notably Australia, Canada and Greenland. In addition to its shareholdings in the foregoing affiliated companies, Northgate has substantial other investment holdings including an approximate 10% interest in Tara Exploration and Development Company Limited, which, through its Irish subsidiary, Tara Mines Limited, has been developing its large zinc-lead deposit near Navan, County Meath, Ireland, where it is anticipated that mining operations will commence late in 1976. Northgate also holds a combined direct and indirect interest of about 9.6% in Vestgron Mines Limited which, through its subsidiary, Greenex A/S, operates a substantial zinc-lead mine in West Greenland.

Northgate and its wholly owned subsidiaries have a total of more than 600 employees, about 95% of which are employed in mining operations and exploration. With nearly 12,000 registered shareholders, the ownership of Northgate is widely spread.

Northgate Exploration Limited



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DUBLIN OFFICE	Irish Base Metals Limited — Gortdrum Mines (Ireland) Limited 162 Clontarf Road, Dublin 3, Republic of Ireland Telephone: 332211, Telex 5881
LONDON OFFICE	Northgate Metals and Minerals Limited Stanhope House, 47 Park Lane, London W1, England Telephone: 01-491-7531, Telex 267615
MINE OFFICES	Irish Base Metals Limited Tynagh, County Galway, Republic of Ireland Gortdrum Mines (Ireland) Limited Tipperary, County Tipperary, Republic of Ireland
AUDITORS IN CANADA	Thorne Gunn & Co., Chartered Accountants Toronto, Canada
AUDITORS IN IRELAND	Griffin, Lynch & Co., Dublin, Republic of Ireland
BANKERS	The Toronto-Dominion Bank, Toronto, Canada Allied Irish Banks, Dublin, Republic of Ireland
TRANSFER AGENTS	CANADA — Crown Trust Company Toronto, Ontario; Calgary, Alberta; Vancouver, British Columbia UNITED STATES OF AMERICA — The Bank of New York, New York, N.Y. UNITED KINGDOM — Charter Consolidated Limited, Ashford, Kent, England
REGISTRARS	CANADA Canada Permanent Trust Company Toronto, Ontario; Calgary, Alberta; Vancouver, British Columbia UNITED STATES OF AMERICA Bankers Trust Company, New York, N.Y. UNITED KINGDOM Morgan Grenfell & Co., Limited, London, England
SOLICITORS	Fasken & Calvin, Toronto, Canada Olin, Murphy, Manuel & Lynch, New York, U.S.A. Whitney, Moore & Keller, Dublin, Republic of Ireland
STOCK EXCHANGE LISTINGS	New York Stock Exchange, New York, U.S.A. The Stock Exchange, London England Toronto Stock Exchange, Toronto, Canada

Financial Highlights

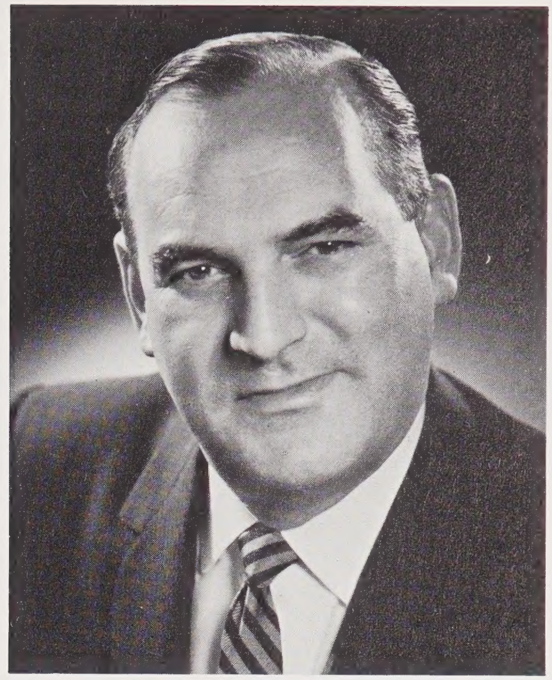
	1974	1973
Net smelter value	$25,945,000	$28,116,000
Operating income (before w.o.'s)	10,720,000	14,301,000
Non-operating revenue (net)	1,635,000	337,000
Cash flow	8,361,000	14,112,000
Per share	$1.27	$2.35
Depreciation and amortization	4,255,000	4,170,000
Income before extraordinary item	4,026,000	10,020,000
Per share	$0.61	$1.67
Net income after extraordinary item	4,026,000	9,120,000
Per share	$0.61	$1.52
AT YEAR END		
Working capital	$16,508,000	$11,957,000
Ratio of current assets to current liabilities	4.4 to 1	3.8 to 1
Total assets	57,781,000	49,346,000
Shareholders equity	49,605,000	45,077,000
Investments and advances	23,644,000	19,839,000
Less provision for decline in value	1,250,000	1,250,000
	22,394,000	18,589,000
Fixed assets	23,233,000	22,474,000
Less accumulated depreciation	15,131,000	12,332,000
	8,102,000	10,142,000
Weighted average number of shares outstanding during the period used in computing earnings per share	6,605,739	5,992,549

Production Highlights

Tynagh Mine	1974	1973
Tons of ore treated	(a)490,356	(a)529,417
Production of concentrates		
Tons of lead concentrates	38,084	(b)74,400
Tons of zinc concentrates	42,511	22,807
Tons of bulk concentrates	4,849	14,363
Tons of copper concentrates	7,038	
Total tons of concentrates	92,482	111,570
Metals contained in concentrates sold		
Lead (lbs)	53.1 million	91.0 million
Zinc (lbs)	39.4 million	32.8 million
Copper (lbs)	1.1 million	2.7 million
Silver (ozs)	870,000	1,450,000
Gortdrum Mine		
Tons of ore treated in concentrator	491,382	330,226
Tons of concentrates produced	13,289	7,106
Tons of roasted concentrates produced	6,368	7,803
Flasks of mercury recovered	775	1,345
Tons of concentrates sold	12,112	13,970
Flasks of mercury sold	908	1,300
Metals contained in concentrates sold (b)		
Copper (lbs)	9.9 million	9.9 million
Silver (ozs)	320,000	340,000

NOTES: (a) Tons treated in 1974 all preconcentrated primary sulphide ore. The 1973 figure includes 379,079 tons of preconcentrated primary sulphide ore, the remainder being secondary ores.
(b) Includes high lead-copper concentrates.

Directors' Report to Shareholders



Patrick J. Hughes
President of Northgate Exploration Limited

The year 1974 was disappointing in many important respects.

Despite the unusually buoyant metal prices that prevailed for most of the year, the financial results from the Company's mining operations were adversely affected by a shortfall in concentrate production, sales and generally higher operating costs.

However, the major factor influencing 1974 financial results as well as considerations relevant to the Companies future mining and exploration activities in Ireland, was the Irish Government's tax legislation, which became law on July 13, 1974, implementing its previously announced intention of withdrawing the consolidated Irish subsidiary companies 20-year exemption from Irish income taxes with respect to their income from mining operations.

Under the provisions of this new legislation — the "Finance (Taxation of Profits of Certain Mines) Act, 1974" — the Irish Government withdrew the existing exemption from Irish income taxes for income from mining operations, effective from April, 1974. The Act requires a determination of income taxes for 1974 and future years at a current rate of approximately 50% of taxable income, but a portion of these taxes will be deferred and not payable on a current basis because of allowances for depreciation and amortization on bases which differ from those used for accounting purposes.

Financial Results

Although average metal prices received for 1974 were — with the exception of copper — significantly higher than those received in 1973, the net revenue for 1974 of $25,945,000 was down from the 1973 comparative figure of $28,116,000.

This is attributable to the shortfall from planned concentrate production during 1974 at the Tynagh Mine and a delay in a shipment of concentrates from the Gortdrum Mine which was scheduled for the current year but not made until January, 1975.

Consolidated net income for the year was $4,026,000 equal to $0.61 per share as compared with $9,120,000 or $1.52 per share in 1973. The principal factors in this reduction of net income, in addition to the aforementioned shortfall in concentrate production and sales, were the imposition of Irish income taxes, effective from April, 1974, appreciably higher operating costs and the effect of the increase in the weighted average number of shares outstanding for the comparative periods. The weighted average number of shares outstanding for 1974 was 6,605,739 shares compared with 5,992,549 shares in 1973. The provision for income taxes in 1974 amounted to $3,400,000, of which $3,265,000 relates to future and deferred income taxes.

Cash flow was $8,361,000 equal to $1.27 per share, down from $14,112,000 or $2.35 per share in 1973. These figures similarly reflect the provision for income taxes and the differential in the number of shares outstanding for the comparative periods.

The sharp increases in lead, zinc, copper and silver prices experienced during 1973 continued for the first half of 1974 but with the exception of zinc, metal prices were significantly lower in the second half of the year. The plunge in copper prices, from the all-time high of £1,390 per metric ton recorded during April to £533 in December, was probably the sharpest decline in history. The year end price of copper, equivalent to approximately 55¢ per lb. U.S., is below the average cost of production for most copper mines throughout the world.

The G. O. B. European Producer price for zinc, which is the relevant price for your Company's production of this metal, was the exception among the 1974 metal price trends. The Producer price was increased twice during the year to £330 per metric ton in March and later in September to £360 per metric ton (39¢ per lb. U.S.).

The influences of the current world wide recession will undoubtedly adversely affect most base metal prices during 1975.

The following table shows the average metal prices received, from sales of concentrates and metals during 1974 with comparative prices for 1973, as well as the average quoted prices for 1974. Prices are based on London Metal Exchange quotations for lead, copper and silver, and the G. O. B. European Producer price for zinc, all expressed in equivalent U.S. funds:

	1974	1973	Quoted Average 1974
Tynagh Mine			
Lead — per lb.	26.0¢	21.6¢	25.7¢
Zinc — per lb.	35.0¢	24.4¢	35.0¢
Copper — per lb.	84.2¢	81.4¢	92.1¢
Silver — per oz.	$4.73	$2.92	$4.48
Gortdrum Mine			
Copper — per lb.	83.0¢	80.7¢	
Silver — per oz.	$4.59	$2.69	
Mercury — per flask	$260	$251	

The different prices received for copper and silver by the Tynagh Mine and the Gortdrum Mine is a factor of the different timing of concentrate shipments from these two mines and the fact that the prices of these two metals are often subject to erratic short term variations.

The table on page 4 summarizes the 1974 financial and production highlights with comparative figures for 1973. A detailed five year comparative summary of financial highlights and production statistics appears on pages 34 and 35.

Operations

Tynagh Mine

In the original 1974 forecast of operations for the Tynagh Mine as set out in the 1973 Annual Report, it was assumed that 805,000 tons of ore would be mined to produce approximately 96,000 tons of concentrates, the latter to consist substantially of almost equal proportions of lead and zinc concentrates. This forecast of concentrate production was subsequently revised to 90,000 tons in the First Quarter report to shareholders published May 14, 1974, when it became apparent that ore production from the underground Zone II area would be below prediction.

The principal factor in the shortfall from planned production and sales of concentrates were the reduced tonnage of ore mined and the high content of copper in ore which required a copper-lead separation to reduce the copper content in lead concentrates to smelter specifications.

A method of separating copper minerals from lead sulphide ore was developed and incorporated into the flotation circuit during the year. This resulted in the production of 7,038 tons of copper concentrates which are currently stockpiled for possible future sale or blending with other lead concentrates of lower copper content. A portion of these copper concentrates had been included in the lead production figures contained in the interim reports published during the year. However, owing to the fact these concentrates are not saleable under present market conditions they have been segregated from the lead concentrate production totals and separately stockpiled. While the cost of producing this material was expensed in 1974 there has been no value attributed to the copper concentrates either in the financial figures or in the value of concentrate inventories included in current assets.

In addition, while it was not anticipated that any appreciable bulk (lead-zinc) concentrates would be produced during the year such production was necessitated owing to the inability to obtain a differential flotation of the slimes fraction of the primary ore.

Therefore, apart from the different proportions of previously scheduled lead and zinc concentrate production, the concentrates meeting smelter specifications and available for shipment only amounted to 85,444 tons of the total 92,482 tons produced during the year.

Gortdrum Mine

While tons treated at the Gortdrum Mine were moderately below forecast, concentrate production was above prediction due to the higher than anticipated grade of ore treated during the year. A total of 491,382 tons was treated in the concentrator yielding 13,288 tons of concentrate. However, owing to a delay in a final shipment of approximately 1,600 tons which was scheduled for 1974 but made during January of 1975, there was a shortfall in concentrate sales which totalled 12,112 tons compared with the forecast figure of 13,700 tons.

Under the present schedule of operations based on the extractable ore reserves down to and including Bench 12, it is anticipated that operations at the Gortdrum Mine will be concluded during the second half of 1975. The feasibility of mining some of the ore grade material below Bench 12 and adjacent to but outside the originally planned pit boundaries, together with certain stockpiled sub-ore tonnages has been thoroughly investigated. Present metal prices and mining costs rule out this possibility.

Operations at both the Tynagh and Gortdrum mines are commented upon in greater detail on pages 13 to 17 of this report.

Forecast of 1975 Operations

The currently projected operating schedule for the Tynagh Mine during 1975 envisages the mining of approximately 720,000 tons, principally from the Main 'J' zone of the Zone II reserves. The grade of ore scheduled for treatment will be higher than reserve average and, after pre-concentration in the dense media plant, is expected to yield approximately 80,000 tons of concentrates. Of this total projected concentrate production, approximately 33,000 tons will be lead concentrates with payable quantities of copper and silver, approximately 38,000 tons will be zinc concentrates, 5,000 tons will be bulk (lead-zinc) concentrates and the remaining 4,000 tons will be copper concentrates.

As was the case in 1974, the anticipated production of copper concentrate in 1975, amounting to approximately 4,000 tons, will be stockpiled for possible future sale or blending with a low copper lead concentrate to conform with existing smelter contract specifications with respect

One of the office buildings at the Tynagh Mine against a background of what was formerly a waste dump and now reclaimed by contouring to blend harmoniously with the local topography.

to maximum allowable copper content. If this material cannot be marketed during the current year, the net saleable concentrate production in 1975 will approximate 76,000 tons or about 11% below the total of marketable concentrates produced in 1974.

While every effort will be made to develop stoping areas in Zone III during the current year to augment the presently scheduled mill feed from the Zone II area of 720,000 tons, no production is presently projected from Zone III in 1975.

The current production schedule for the Gortdrum Mine during 1975 assumes the treatment of about 320,000 tons of ore to yield approximately 12,000 tons of concentrate. This represents the remaining mineable ore grade material available from open pit reserves and surface stockpiles which is considered economic under present mining costs and foreseeable metal prices.

Shipments of concentrates from the Gortdrum Mine during 1975 are expected to total approximately 14,800 tons. The latter figure includes the delayed shipment from 1974 production.

Exploration

During 1974 your Company's exploration activities in the Republic of Ireland continued to be inhibited by the absence of a clear and concise definition of the Irish Government's fiscal policy toward the mining industry. In particular, the prolonged negotiations with respect to the terms under which the most recently discovered orebody in Ireland — Tara's 1970 discovery at Navan — is to be developed, caused considerable hesitancy within the exploration industry.

Although agreement in principle on these terms was announced in February of this year, at the time of writing it is uncertain whether or not these terms represent the taxation-participation level to be imposed in the case of future economic mineral discoveries in Ireland.

Certainly, a pre-requisite of exploration activities in any country is the existence of a precise policy which will ensure the mine finder's right to develop and mine mineral discoveries with security of tenure and an equitable distribution of any profits which may be realized between the developing company and the Government.

Corporate profits are the source from which the industry endeavours to perpetuate its operations and concurrently create new employment and generate auxiliary industrial growth, thus ensuring the greater opportunity for government revenues from these correlated activities. Otherwise, it would be most difficult, if not impossible, to reconcile the objectives of the exploring companies with the essential national economic goals in these important areas.

Among the disincentives arising from the recent dispute over the Navan deposit, the most disturbing one concerns the ownership of mineral rights in Ireland. It has been acknowledged by the Minister for Industry and Commerce that a serious problem in this regard has arisen and that he may have to introduce amending legislation. The problem of mineral rights stems mainly from the fact that the distribution of State and privately owned unworked mineral rights is in most cases not known with any degree of certainty without a search of mineral title.

During the past year, your Company has carried out numerous searches of mineral title before committing funds to exploration drilling. The results of these searches have shown that areas of State owned minerals are frequently entangled with areas where the mineral rights are in private or unknown ownership. This has caused considerable delays in implementing drilling programs owing to the difficulty in establishing actual ownership.

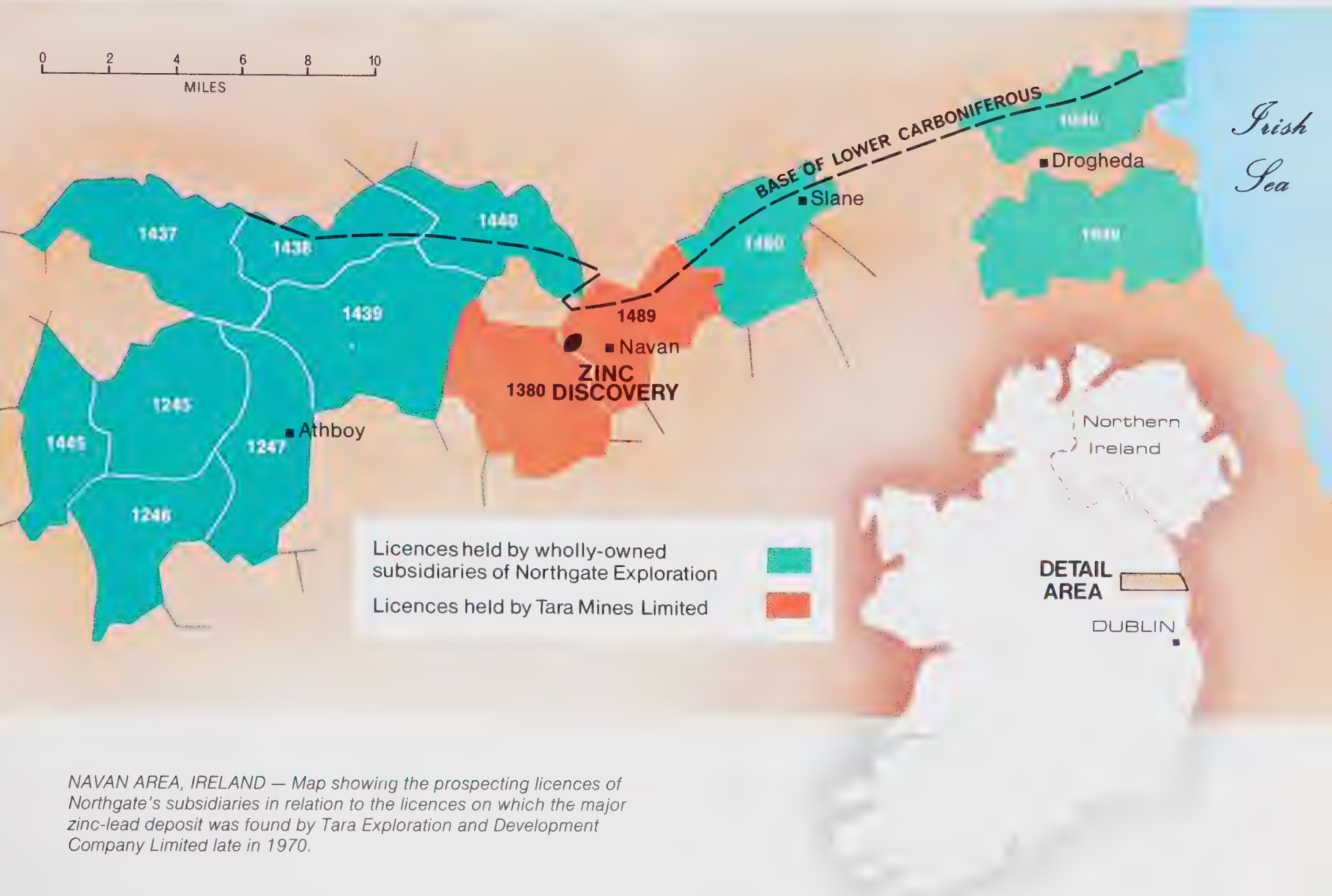
Unless this uncertainty over mineral rights is resolved, the exploration business in Ireland will sooner or later grind to a halt. Your Company believes, however, that the uncertainty can be resolved but it may take considerable time. In the meantime, the Company intends to proceed with its long range exploration program in Ireland, particularly in areas where the ownership of mineral rights can be clearly established.

Throughout 1974, the Company continued its exploration program in Ireland (quite apart from the ongoing activities with the Tynagh and Gortdrum mine lease areas) in spite of the various uncertainties. The number of prospecting licences held by the Company remained at 181 (approximately 2,500 square miles) as no new prospecting licences were granted to the Company during the year. Joint venture exploration with other companies, including affiliates, was also continued.

The Company's exploration program during 1974 concentrated mainly on intensive geological mapping, prospecting, and detailed geochemical and geophysical surveys. Numerous diamond drill targets have been outlined as a result of the year's work. However, each of these will have to be subjected to a mineral rights search before further work is undertaken. Some diamond drilling was carried out and the results are encouraging but considerably more work will be required for a proper evaluation.

In this regard, one of the more important areas is that covered by the licences held by your Company to the northwest and west of the major zinc-lead deposit near Navan, County Meath, found by Tara Exploration. Drilling on

An aerial view of the minesite of Tara Mines Limited, Navan, County Meath, Ireland. Centre in the picture is the development shaft which has now been completed to its objective depth of 1,120. Construction of the 7,500 ton per day concentrator complex is scheduled to proceed during 1975.



NAVAN AREA, IRELAND — Map showing the prospecting licences of Northgate's subsidiaries in relation to the licences on which the major zinc-lead deposit was found by Tara Exploration and Development Company Limited late in 1970.

prospecting licence 1440 in this area has indicated a widespread mineralized area of relatively low metal content with widths of up to 70 feet. Assay results from one of the later holes has returned a grade of 24.45% combined zinc and lead over a 20 foot interval from 369 feet to 389 feet. Grid spacing of drill holes varies from 100 feet to 600 feet and drilling is being continued.

Exploration Outside of Ireland

As previously reported, in 1973 your Company, through its Spanish subsidiary, Imebesa, entered into an agreement with Phelps Dodge Europa Limited with respect to prospecting rights covering 41 square miles in northeastern Spain held by Imebesa. Under the terms of this agreement, Phelps Dodge had the right to earn a majority interest in the property upon the expenditure of a specified sum for exploration.

The program carried out by Phelps Dodge confirmed the presence of several geochemical anomalies. However, no follow-up work was carried out and at the end of 1974 Phelps Dodge elected against any further participation in the property. Results of the work completed by Phelps Dodge are now being assessed by your Company before deciding on a further exploration program.

The joint venture program entered into with its associated Westfield Minerals Limited in the Maritimes provinces of Canada continued during 1974. This joint venture in which your Company has a 40% participating interest (Westfield 60%) involves tracts in Nova Scotia covering approximately 144 square miles in 22 areas in a Carboniferous limestone geological setting. At the end of 1974 the ground held was reduced to approximately 70 square miles as certain areas were eliminated as a result of work carried out since April last.

Several geochemical and geophysical anomalies have been located and it is anticipated that diamond drilling will be carried out during the 1975 field season.

In Newfoundland, agreement in principle has been reached with Reid Newfoundland Corporation to explore approximately 600 square miles of ground held by that company. The exploration effort is similarly directed toward the investigation of carboniferous limestone rocks for base metals. The combined expenditures for this joint venture undertaking in Nova Scotia and Newfoundland amounted to approximately $150,000 in 1974 and a similar amount has been budgeted for the 1975 program.

In the State of Alaska (U.S.A.) your Company and Westfield Minerals Limited entered into a joint venture undertaking involving an offshore gold placer prospect near Nome. An Alaskan company, Westpark Exploration, has been incorporated for this project and the respective equity interests will be held by Northgate and Westfield as to one-third each and the remaining one-third by private interests. Owing to unsatisfactory ice conditions, the program of up to 9,000 feet of drilling which was scheduled to be completed during the winter season, had to be postponed. The rights under this phase of the project have been extended for one year. Negotiations on joint exploration of adjacent onshore and offshore areas are being continued with the view to carrying out exploration on the onshore areas during the 1975 summer field season.

Affiliated Companies

The activities and interests of our principal affiliated companies (some of which are in joint venture with Northgate) complement those of your Company by providing an exposure to exploration and mine development in other countries in addition to Ireland, notably Australia and Canada. These principal affiliated companies and the respective equity interest held by Northgate are: **Westfield Minerals Limited** (45%), **Whim Creek Consolidated N.L.** (32%), and **Anglo United Development Corporation Limited** (17%).

The current and planned activities of principal interest with respect to these three affiliated companies are described in brief outline on pages 19 to 23 of this report.

Other Investments

In addition to shareholdings in the aforementioned affiliated companies, your Company has substantial other investments including 630,441 shares of Tara Exploration and Development Company Limited, 220,000 shares of Vestgron Mines Limited and 129,032 shares of W. R. Grace & Co. The combined quoted market value of these investment shareholdings at December 31, 1974 was $13.7 million.

The following data are pertinent to these three major investment holdings of your Company:

Tara Exploration and Development Company Limited

Tara, through its Irish subsidiary, Tara Mines Limited, was, in the period from January 1973 to August 1974, engaged in developing the large zinc-lead deposit near Navan, County Meath, Ireland, for planned production in 1975. The underground development program was well advanced when operations were suspended in August 1974 due to the unacceptable terms of the proposed State mining lease then offered by the Irish Government's Minister for Industry and Commerce.

At the time operations were suspended, the service shaft and associated tunnel work had been virtually completed in readiness for stope preparations, the access shaft sunk to its objective depth of 1,120 feet and raising of the main production shaft well advanced. Construction of the main surface treatment facilities had commenced in preparation for the then scheduled start-up of production in 1975.

In February 1975, agreement was reached between the Minister for Industry and Commerce and Tara Mines Limited on the terms of a State mining lease in respect of the Navan deposit. The agreement which was signed on February 14, 1975 provides for the issuance of a State mining lease to Tara Mines Limited on the following principal terms:

— A free 25% equity participation by the Minister in Tara Mines Limited, together with royalty payments, calculated on pre-tax income, of 4.5%. In addition, profits will be subject to Irish income taxes at a rate of approximately 50%.

— A maximum annual production rate in the range of 2.4 to 2.5 million short tons of ore during the debt payback period.

— The transfer, free of charge to the Minister, of the ownership of the minerals which Tara controls within the lease area.

— The term of the lease will be for 25 years and the lease will include renewal provisions.

— Arrangements which will enable concentrates to be supplied at normal commercial terms, to an Irish zinc refinery when such a facility is established.

— The appointment of the Minister's nominees to the Board of Directors of Tara Mines Limited.

The Minister and Tara Mines Limited have agreed to finalize details of the State mining lease as soon as possible in order to facilitate completion of the senior financing and the recommencement of work on the Navan project.

Expenditures to date on the Navan project amount to approximately $35 million and the anticipated cost of completion to production is estimated at between $100 and $125 million. Negotiations for interim and senior financing are currently in progress.

While the date of start-up of production cannot be precisely established at this time, it is anticipated that tune-up operations will commence late in 1976.

The planned 7,500 ton per day concentrator (equivalent to 2.4-2.5 million tons per annum) is designed to produce under optimum conditions some 400,000 metric tons of zinc-lead concentrates annually.

Your Company's holding in Tara approximates 10% of the issued and outstanding capital.

The development shaft headframe of Tara Mines Limited, Navan, County Meath.

Vestgron Mines Limited

Vestgron Mines Limited reported net earnings of $10,336,000 or $2.44 per share for 1974. Earnings are derived from the sale of lead and zinc concentrates produced at the Black Angel Mine of the company's wholly owned subsidiary, Greenex A/S, West Greenland. The mine has completed its first full year of commercial operation and the above reported earnings are after deducting interest and other charges relating to its senior financing arrangements.

Revenue of $36,279,000 in 1974 was from the sale of 101,465 metric tons of zinc concentrate and 37,687 tons of lead concentrate. Shipments from the opening of the navigation season at mid-year to the onset of winter ice in November, amounted to 165,000 metric tons of zinc concentrate and 37,500 tons of lead concentrate. Concentrate production in 1974 amounted to 168,000 metric tons of zinc concentrate and 36,900 metric tons of lead concentrate from the treatment of 575,000 metric tons of ore grading 18.3% zinc and 5.1% lead. An operating rate 10% above nominal design capacity was achieved during the second half of 1974.

Above: *The Black Angel Mine at Marmorilik, Greenland, operated by Vestgron's subsidiary, Greenex A/S, is linked by a pair of mile-long aerial tramways to the concentrator across the fjord. The tram shown carries crushed ore at the rate of 110 metric tons per hour to the 1,650 tons per day concentrator.*

Year end inventories of concentrates were 105,400 metric tons of zinc concentrate and 7,500 metric tons of lead concentrate. Of this inventory, 27,000 tons of zinc and 7,500 tons of lead concentrate were at Marmorilik. The balance of the zinc concentrate is awaiting treatment at European smelters.

Since some of the concentrates shipped in one year are not sold until the following year, 1975 will be the first year in which revenues and earnings reflect the full annual production volume.

Ore reserves at the Angel Zone were 3,442,000 metric tons averaging 15.7% zinc, 5.1% lead and 1.0 ounce per ton of silver, compared with 4,440,000 metric tons averaging 14.9% zinc, 5.0% lead and 1.0 ounce per ton of silver. The revised figures plus the year's production give substantially the same metal content as last year's results. A surface drilling program to the east of the present workings was completed and the development drift to the Cover Zone, which started in September, is scheduled for completion in 1975. Reserves for these areas will be calculated on completion of this work.

The foregoing information relative to Vestgron Mines Limited is based upon published data including its 1974 Annual Report.

Your Company's direct holdings in Vestgron Mines Limited of 220,000 shares represents approximately 5% of the latter's issued and outstanding capital. As Northgate owns approximately 45% of Westfield Minerals Limited which in turn owns 414,510 shares of Vestgron, your Company's combined direct and indirect ownership of Vestgron approximates 406,530 shares or about 9.6% of the latter company.

W. R. Grace & Co.

This company reported a net income equal to $4.12 per share for 1974 and paid dividends in that year of $1.60 per share. Your Company's ownership of 129,032 shares of W. R. Grace & Co. is a minority interest.

General

Although 1974 financial results were appreciably below expectation, working capital at December 31, 1974 amounted to $16,508,000 — an improvement of $4,551,000 over the 1973 year end figure of $11,957,000. The major portion of this working capital consists of cash, including short term securities and deposits.

Dividends

The Board of Directors has declared a dividend of U.S. $0.25 per share payable on April 15, 1975 to shareholders of record April 1, 1975.

However, because of the combined impact of lower metal prices and reduced concentrate production, it is expected that financial results for the current year will probably show a reduction from those obtained in 1974. An assessment of the situation will be made during the second half of 1975.

Organization

During 1974 there were certain organizational changes in your Company. Mr. George T. Smith's resignation as an officer and director of the Company was announced with deep regret at the Annual and General Meeting of shareholders held on April 26, 1974. Mr. Smith's unselfish dedication and hard work combined with his unique and unquestionable ability made a very substantial contribution to the successful development of this Company over a period of more than ten years. Mr. F. Douglas Gibson was elected to fill the Board vacancy resulting from Mr. Smith's resignation.

Mr. Thomas E. Kelly was appointed secretary-treasurer of your Company following the retirement of Mr. Robert H. Wright who contributed many years of faithful service to the Company.

On behalf of the Board of Directors,

Pat. J. Hughes.

President

March 21, 1975

Centre in this picture is the shaft headframe and hoist at The Tynagh Mine, County Galway, Ireland. The main concentrator partially shown at the right and a portion of the dense media separation plant at the extreme left.

REVIEW OF OPERATIONS

TYNAGH MINE

During the year a total of 667,119 tons of primary sulphide ore was mined and treated, of which some 44,000 tons came from a stockpile of open pit ore and the balance, with the exception of a small tonnage of development ore, came from the main underground Zone II area. This compares with 682,734 tons mined in 1973 of which 235,076 tons were pit primary sulphide, 297,950 tons were underground primary sulphide from Zone II reserves and the remainder 149,708 tons of pit secondary ore.

The shortfall from the planned mining of 805,000 tons during 1974 was due to a lower than anticipated tonnage in the hanging wall lenses of the main 'J' zone and the unsuitability of the ore in the eastern part of the Zone II area under existing mining costs and marketing conditions.

This shortfall in availability of mineable ore was partially offset by the higher than reserve average lead grade in the ore treated and by the better than predicted zinc recovery. Total production of 92,482 tons of concentrates compared with the original forecast total of 96,000 tons.

In contrast to 1973, all ore is now preconcentrated in the dense media separation plant before treatment in the concentrator. Of the total 667,119 tons of ore treated in the dense media plant, 176,763 tons were rejected to waste in the separation process and the balance of 490,356 tons with an upgraded metal content was fed to the concentrator.

Ore feed to the concentrator in 1973, which included 379,709 tons of preconcentrated product from the dense media plant and 149,708 tons of pit secondary ore, totalled 529,417 tons.

Underground development in the Zone II area continued on schedule and good progress was made on drives on two levels in the Zone III area which is scheduled to be phased into production by late 1975 or early 1976 to supplement ore production from the Zone II mine area. A total of approximately 8,000 feet of development was carried out during the year. Of this total footage, 4,000 feet was carried out in the 'J' zone stope development, of which 3,000 feet was small cross section heading (9½′ by 9½′) and 1,000 feet was large cross section headings (10′ by 15′).

The balance of development consisting of 4,000 feet was large cross section headings carried out in the main development toward the Zone III area on two levels and also in the 'J' zone hanging wall lenses. The development carried out in the 'J' zone hanging wall lenses was very disappointing as very little ore of a reasonable continuity was found.

At the end of 1974 only about two months work at a reduced footage was required to complete the 'J' zone stope development. Efforts will then be concentrated on developing the Zone III area. In plan, the Zone III area is located about 600 feet east of Zone II and access to the area is presently from the 4700 level and the 5000 level headings.

Underground ore production in October of 65,642 tons was the peak period in 1974 and compares with the average monthly production for the entire year of around 55,590 tons.

The grade of the 667,119 tons of ore fed to the dense media separation plant for preconcentration was:

Lead %	Zinc %	Copper %	Silver ozs/ton
4.94	4.38	0.50	2.56

The grade and tonnage of the product from the dense media plant treated in the concentrator was:

Tons	Lead %	Zinc %	Copper %	Silver ozs/ton
490,356	6.6	5.7	0.70	3.40

The following is a comparative tabulation of the ore categories and their respective metal content which were treated in the concentrator during 1973:

Type	Tons	Lead %	Zinc %	Copper %	Silver ozs/ton
Sulphide (a)	379,709	7.6	4.7	0.8	3.4
Mixed oxide	126,271	16.4	5.3	0.8	3.6
Lead oxide	23,437	12.9	3.4	1.2	4.6
Total Tons	529,417				

(a) Preconcentrated primary

The following is a summary of concentrate production for 1974 with comparative figures for 1973:

	1974	1973
Tons of lead concentrate	38,084	74,400(b)
Tons of zinc concentrate	42,511	22,807
Tons of bulk concentrate	4,849	14,363
Tons of copper concentrate	7,038	—
Totals	92,482	111,570

(b) Includes high lead-copper concentrate

The high content of copper in the ore required a copper-lead separation to reduce the copper content in lead concentrates to smelter specifications of existing contracts. An improved method of separating copper minerals from lead sulphide ore was developed and incorporated into the flotation circuit during 1974. This resulted in the production of the aforementioned 7,038 tons of copper concentrate during 1974 which are stockpiled for possible future sale or blending.

The copper concentrates are not saleable under current market conditions due to the presence of tennantite and tetrahedrite minerals. It is to be noted that the cost of producing these concentrates was expensed in 1974 but no value for these concentrates is included in the 1974 financial results. The metal content of the 7,038 tons of copper concentrate produced is 27.1% lead, 8.1% zinc, 20.1% copper and 69.0 ounces of silver per ton. It is anticipated that additional quantities of copper concentrate will be produced in 1975.

The principal factors in the reduction of lead and zinc concentrate production from the forecast figures were:

(1) the shortfall in ore mined.

(2) the high copper content in ore which necessitated the previously mentioned lead-copper separation process resulting in a greater quantity of copper concentrate and a corresponding reduction in lead concentrate.

(3) the production of bulk concentrate from the slimes fraction of the primary ore as it was not possible to obtain a differential flotation process on this material.

All of these factors which adversely affected 1974 concentrate production will continue to influence the financial results for 1975.

The grades in the lead and zinc concentrates produced during 1974 were consistent with prediction as were the overall metal recoveries in all concentrates, with the exception that zinc recoveries were considerably higher than the forecast 70%. Metallurgical recoveries of the metals from the primary ore treated during 1974 and the comparative figures for the recoveries from the primary ore treated in 1973 were:

	Recovery			
	Lead %	Zinc %	Copper %	Silver %
1974	86.2	77.8	76.8	75.0
1973	87.0	59.9	77.6	74.0

The approximate total of payable metals contained in concentrates sold during 1974 were 53.1 million pounds of lead, 39.4 million pounds of zinc, 1.1 million pounds of copper and 870,000 ounces of silver. These figures do not include the metals contained in the copper concentrate produced during the year.

Direct operating costs per ton of ore mined during 1974 averaged $10.69 against $9.00 per ton in 1973, an increase of approximately 19%. This increase in unit costs is partially a factor of the lower tonnage of ore mined during 1974 as well as the fact that substantially all ore mined during the year came from underground reserves whereas in 1973 only 44% of the ore mined came from underground reserves.

Direct operating costs expressed in terms of ore treated in the concentrator during 1974 averaged $14.54 per ton compared with $11.61 per ton in 1973, an increase of approximately 25%. However, these cost figures are also not directly comparable as the unit increase is partially attributable to the lower tonnage of ore treated in 1974.

While it is not possible to provide precise comparative figures relating to the increase in unit operating costs owing to the foregoing factors, it is obvious that expenses are escalating and this trend is expected to continue during 1975.

Production Schedule for 1975

Owing to the problems experienced in mining from the underground Zone II area during 1974 due to the lower than anticipated tonnage available from the hanging wall lenses of the Main 'J' zone and the unsuitability of the East (ABC) zone reserves under existing mining costs and marketing conditions, the current projected operating schedule for 1975 assumes the mining of approximately 720,000 tons of ore, principally from the main 'J' zone. The grade of ore scheduled for treatment will be higher than reserve average.

After preconcentration in the dense media plant, the upgraded product to the concentrator of about 500,000 tons is expected to yield approximately 80,000 tons of concentrates. Of this total projected concentrate production, approximately 33,000 tons will be lead concentrates with payable quantities of copper and silver, approximately 38,000 tons will be zinc concentrates, 5,000 tons will be bulk concentrates and the remaining 4,000 tons will be copper concentrates. The market and economic considerations with respect to the copper concentrates will be the same as those affecting the 1974 production of this material.

Underground Ore Reserves — Zone II

As previously stated, development work carried out during the year both in the main 'J' zone and the hanging wall lenses of the 'J' zone, revealed less ore than expected. Stope development during the year on the 'J' zone showed less ore and also gave lower grades in lead, zinc, and silver than indicated by drilling, particularly in the large stopes in the central section of the zone. A re-assessment of ore reserves in the main 'J' zone resulted in a loss of approximately 155,000 tons and a reduction in average grade.

Development work in the hanging wall sections of the 'J' zone demonstrated a lack of continuity of the ore lenses with a resultant reduction for this area of approximately 55,000 tons.

In the original planning of the Zone II area of the underground mine it was expected that approximately two-thirds of the ore production would come from the 'J' zone and hanging wall lenses and the remaining third from the East (ABC) zones. On re-evaluation of the East zones, taking into account current mining costs and the presence of tennantite and tetrahedrite minerals which would result in concentrate that would not be marketable under existing smelter specifications, approximately 350,000 tons were taken out of reserves from this eastern area of Zone II. Although efforts will be made to develop the remaining portion of about 130,000 tons from the East (ABC) zones, none of this material has been scheduled for treatment during 1975.

The resultant recalculation of the Zone II ore reserves, including dilution of 5% at zero grade, at December 31, 1974 is:

	Grade			
Tons	Lead %	Zinc %	Copper %	Silver ozs/ton
2,420,000	3.74	3.13	0.29	1.36

Potential Ore — Zone III

The lead-zinc-copper mineralized zone designated Zone III is located about 600 feet east of Zone II and was tested several years ago by surface diamond drilling consisting of some 60 holes drilled 100 feet apart on 200-foot sections. Analyses of previous work indicate the following approximate tonnage and grade of mineralized material that probably could be mined at a profit:

	Grade			
Tons	Lead %	Zinc %	Copper %	Silver ozs/ton
1,850,000*	3.40	4.60	0.28	0.64

*Includes 10% dilution.

Development headings on two levels are progressing toward the Zone III area. The drive on the 5000 level has now entered the mineralized zone and detailed diamond drilling

is now in progress. While every effort will be made to develop stoping areas in Zone III during the current year, no production is scheduled for 1975 in the present forecast. It is expected that stopes in the Zone III area may produce up to 150,000 tons in 1976 to augment stope production from Zone II.

Exploration — Tynagh Mine Area

Exploration of the Tynagh Mine area continued during the year without any great success. Induced polarization surveys to the east of the mine area near the reported site of the old Tynagh Mine failed to give any drilling targets that warranted further work. To the west of the mine, three diamond drill holes were put down to test a geophysical anomaly located in an area where previously undiscovered high grade float was found. No significant mineralization was located by this drilling.

To the south of the mine area, detailed exploration work located float containing barite mineralization which is not thought to have come from the mine area. A weak geochemical anomaly and moderate induced polarization responses have been located in the area.

A drilling program to test geological targets beneath the main Tynagh orebody was commenced towards the end of the year. This drilling encountered minor base metal mineralization but nothing of economic significance was found. This program is to be continued during 1975.

GORTDRUM MINE

Operations at the concentrating plant have continued throughout the year on a seven days a week work schedule, with the result that tonnage treated and concentrate production were considerably increased over 1973, when a five day work week was in effect for eleven months.

The 1973 Annual Report mentioned that an examination was being made of the possibility of treating concentrates from the remaining stockpiled sub-ore material utilizing a solution process. Although the examination of this process for refining such concentrates have been technically encouraging, it is not considered feasible to treat this material at prevailing market prices. Similarly, the study undertaken to determine the possibility of mining the ore grade material below Bench 12 by conventional mining methods has indicated it would not be economic at current or presently foreseeable mining costs and metal prices.

The current operating schedule projected for 1975 involves mining out the remaining ore available in the open pit down to Bench 12, together with the relatively small quantities of ore scavenged from below this level plus other tonnage of ore grade material recovered from stockpile. This schedule envisages the completion of mining and milling operations during the second half of 1975, with a somewhat earlier closure of the mercury plant.

Concentrate shipments are expected to continue until the end of 1975, because plant production in the latter part of the operating period will outstrip the current shipping program.

Production

The following are the pertinent operating and production data for the year together with comparative figures for 1973:

	1974	1973
Concentrator		
Tons of ore milled	491,382	330,226
Grade		
Copper — %	1.32	1.14
Silver — ozs/ton	0.95	0.80
Metallurgical recoveries:		
Copper	84.1%	80.3%
Silver	83.2%	79.5%
Concentrates produced — tons	13,288	7,106
Grade		
Copper — %	41.19	42.53
Silver — ozs/ton	29.06	29.52
Mercury Plant		
Roasted concentrates produced — tons	6,369	7,803
Grade:		
Copper — %	39.24	33.03
Silver — ozs/ton	27.73	26.17
Mercury recovered — flasks	775	1,345

Direct operating costs per ton of ore treated, which includes mining, milling, roasting, mine services, mine administration, transportation and loading of concentrates, head office costs in Ireland and exploration costs in the mine area amounted to $12.09 which compares with $11.21 per ton in 1973. This approximate 8% increase in unit cost is largely attributable to steep escalation in wages, supplies, power and spare parts, despite the offsetting effect of the approximate 48% increase in tonnage of ore treated in 1974.

On a nearly comparable basis of tons treated in 1972 (401,635 tons versus 491,382) this increase in unit cost over the two year period is in the order of approximately 40%.

Mining

A total of 522,300 tons of ore averaging 1.29% copper was mined during the year, of which 337,100 tons grading 1.41% copper was delivered to the crusher for treatment in the concentrator and 185,200 tons grading 1.08% copper was placed in stockpiles. The balance of the plant feed, amounting to 147,200 tons averaging 1.11% copper, was reclaimed from stockpiles.

Additional information obtained from a short diamond drilling program at the east end of the pit has been used to reassess the ore reserves within open pit limits. This resulted in an increase in reserves of 5,800 tons grading 3.53% copper, which is reflected in the ore reserve calculation at December 31, 1974.

Marketing of Metals and Concentrates

After provision for Government royalty, amortization and other charges, net profit of Gortdrum Mines (Ireland) Limited for the year amounted to $358,385 as compared with $1,324,000 in 1973. However, the 1974 profit was arrived at after provision for taxes on income in the amount of $215,760. There was no such item in 1973.

During the year, 12,112 tons of concentrates were shipped to smelters compared with 13,970 tons in 1973. The proceeds from concentrates sold during 1974 was $8,088,240 and the cost of producing these concentrates was $6,570,736.

A total of 908 flasks of mercury (76 lbs. per flask) were sold during 1974, the net proceeds of which amounted to $228,492. The cost of producing the mercury sold amounted to $877,049.

The benefits of the appreciably increased price of copper which obtained, for a short period earlier in the year, have been largely offset by subsequent drastic declines in price. London Metal Exchange quotations for copper reached a peak in April, 1974 equivalent to $1.52 per pound and then dropped to around 56¢ per pound at year end. Consequently, the average price received from sales of concentrates in 1974 was 83.0¢ as compared with 80.7¢ in 1973.

Accordingly, the very significant decrease in profits during 1974 was, with the exception of the effect of income taxes, substantially the result of increased operating costs.

Metals contained in concentrates shipped during the year amounted to approximately 9.9 million pounds of copper and 320,000 ounces of silver. This compares with 9.9 million pounds of copper and 340,000 ounces of silver contained in concentrates shipped during 1973.

Ore Reserves

Estimated ore reserves in the mine open pit down to and including Bench No. 12, at December 31, 1974 are as follows:

	Grade	
Tons	Copper %	Silver ozs/ton
297,400	1.91	1.37

Note

In addition to ore in place below Bench No. 12, there is further ore grade material adjacent to, but outside of the originally planned pit boundaries. Neither of the two foregoing categories are presently scheduled for production and are not included in ore reserves. The feasibility of mining this material has always been in question, and present metal prices and mining costs rule out this possibility.

Stockpiles at December 31, 1974

	Tons	Copper
Surge and Auxiliary Stockpiles	5,900	1.66%
Stockpile No. 1 (sub-ore)	55,990	0.51%
No. 2 (sub-ore)	460,500	0.62%
No. 2a (sub-ore)	860,100	0.47%
No. 3 (ore)	18,200	0.68%
No. 3a (sub-ore)	49,100	0.58%
No. 3b (ore)	13,700	1.37%
No. 4 (ore)	3,000	0.88%

The material classified above as sub-ore is very high in impurities and therefore concentrates produced from it would not be separately saleable under existing smelter contracts. Because of this and of the low copper content, it is not considered that any of the sub-ore can be economically treated at current metal prices.

Production Schedule for 1975

As previously noted, the production schedule for 1975 assumes the completion of mining and milling operations during the second half of 1975, with an earlier closure of the mercury plant and its related roasted concentrate production. The current production schedule projected for 1975 envisages the treatment of about 320,000 tons of ore yielding an estimated 12,000 tons of concentrate.

Shipments of concentrates during 1975 are expected to be about 14,800 tons. While it is anticipated that 1975 operations and shipments of concentrates and metals will yield a modest cash flow assuming the continuation of current metal prices, it is expected that there will be a net loss for the year after provision for amortization and other charges.

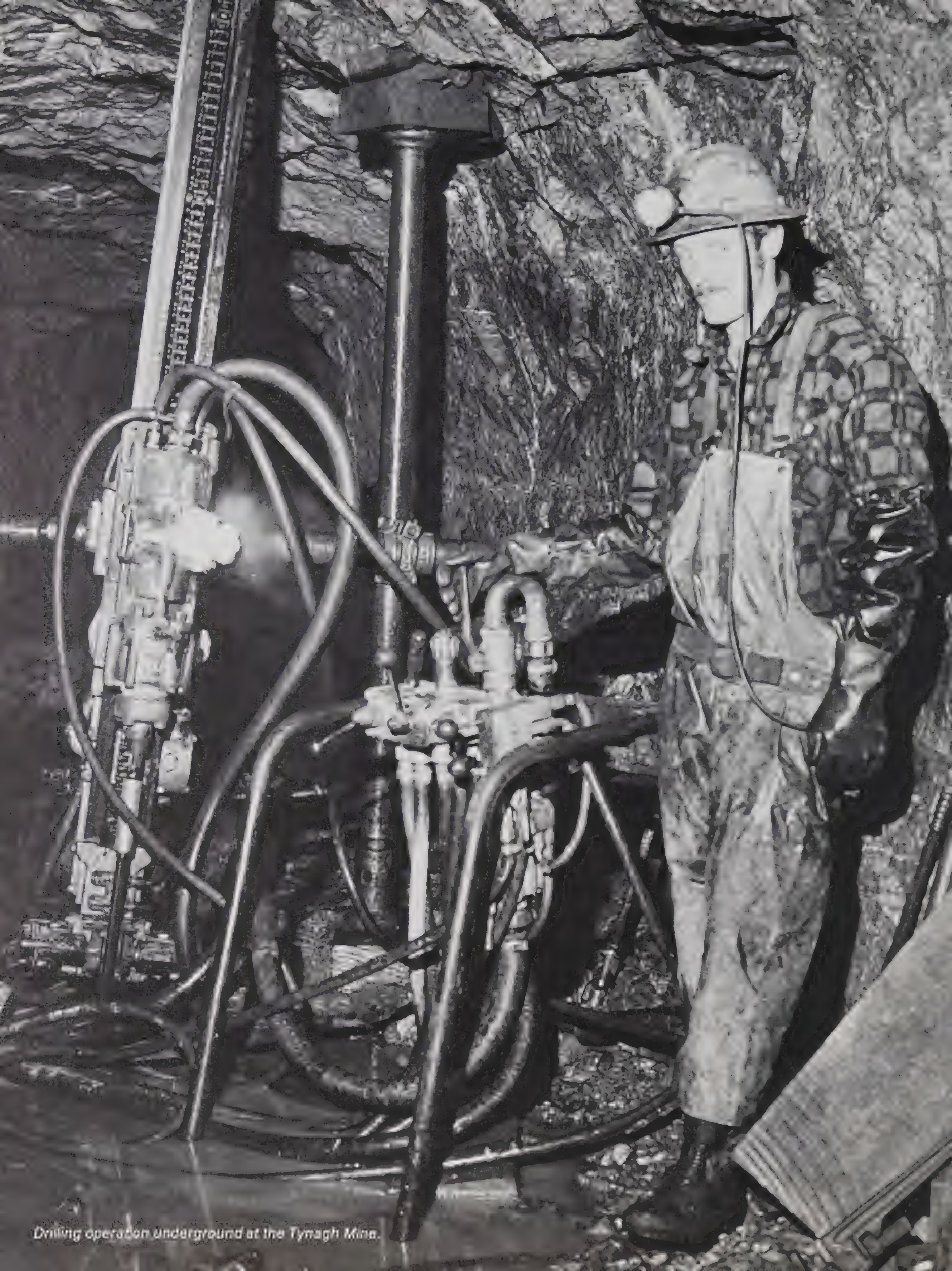
Exploration — Gortdrum Mine Area

Ten diamond drill holes for a total of 5,821 feet of drilling, were completed during the year on the Gortdrum Mine area.

Seven of these holes were sited to follow up the weak lead-zinc mineralization located in the area northwest of the mine where drilling was carried out last year and in 1972. All the holes intersected weak lead-zinc mineralization, but the best intersection obtained was 8.83% lead-zinc combined over 5.0 feet.

Two drill holes designed to test the strong lead-zinc geochemical (soil) anomaly in an area east of the mine failed to substantiate these earlier encouraging indications. A single hole was drilled beneath the Gortdrum ore zone, designed to check for copper mineralization in the Lower Palaeozoic basement approximately 900 feet below the base of the orebody. Due to excessive deviation, this hole was stopped without intersecting the main fault zone. It has, however, indicated weak copper mineralization continuing to depth, in all of the sub-limestone formations. A second hole is being drilled.

A limited program of Megneto Telluric surveying was undertaken in the immediate vicinity of the mine, without any conclusive results.



Drilling operation underground at the Tynagh Mine.

AFFILIATED COMPANIES

ANGLO UNITED DEVELOPMENT CORPORATION LIMITED

During 1974 the Company continued its long range and widely based exploration program in the Republic of Ireland where it holds interests in a total of 77 prospecting licences (through its Irish subsidiary, Munster Base Metals Limited) as well as in Canada where its principal activities during the year were concentrated on the 20-claim Camp Lake gold property in the Yellowknife district, Northwest Territories.

Exploration in Ireland

The major emphasis on exploration in Ireland was directed toward a comprehensive program involving the 53 prospecting licences held under option from La Societe Miniere et Metallurgique de Penarroya (Penarroya) which cover an area of approximately 600 square miles. The 1974 program involved intensive geological mapping and prospecting, both reconnaissance and detailed soil geochemistry and in addition, induced polarization surveys in various areas.

Highlights of the geochemical soil sampling program have been the further extension and delineation of the lead-zinc anomaly on Mallow licence 441, the appearance of a strong lead anomaly on Kerry licence 572, and more recently the discovery by deep sampling of a significant copper anomaly only 1,200 feet west of the known Mallow copper-silver deposit.

The induced polarization surveys have defined anomalously high chargeability zones in Donegal, Monaghan and particularly on licence 456 in Wexford, adjacent to known lead and zinc mineralization.

As a result of this program with respect to the Penarroya licences, the Company now has several exploration targets which will require substantial diamond drilling.

The newly discovered copper anomaly indicated by deep power drill soil sampling offers the interesting possibility it may indicate the presence of mineralization along strike of the known copper-silver deposit 1,200 feet away. Widely-spaced holes drilled during the 1972-73 fiscal period on the latter deposit indicated the possibility of the occurrence of about 4 million tons of mineralized material grading about 0.69% copper and 0.86 ounce of silver per ton over a length of about 1,200 feet. Approximately 5,000 feet of diamond drilling will be required to test for extensions of the known copper-silver deposit and the recently found copper anomaly 1,200 feet to the west will require an I.P. survey and subsequently diamond drilling.

The other area of high interest in this same licence group (No. 441) is in connection with the late 1973 discovery of lead and zinc mineralization which on the basis of further geochemical surveying is now indicated to extend for 2,000 feet to the west of the known lead and zinc mineralization. This lead-zinc area will require trenching and diamond drilling.

The group of five licences in the Wexford Area are prominent in the 1975 exploration planning. A detailed induced polarization survey carried out over a broad area surrounding the known lead and zinc mineralization on licence 456 which was diamond drilled in 1972, has indicated several significant I.P. anomalies each of which warrants diamond drilling. A program of at least 6,000 to 10,000 feet of diamond drilling has been recommended to evaluate these anomalies and also to test the area immediately adjoining the presently known mineralization tested by the 1972 drilling program.

Among other important 1975 targets is the wholly owned licence in Clontibret where drilling many years ago by former operators indicated interesting antimony and associated gold values.

Exploration in Canada

During the 1974 field season, the Company conducted a program of exploration on its 20-claim Camp Lake gold property in the Yellowknife district, Northwest Territories, consisting of geological mapping, prospecting, trenching and 4,834 feet of diamond drilling.

The presently known main gold-bearing zones at the Camp Lake property are the No. 1 and No. 2 Zones and the South Zone. Prior to the 1974 program, a total of approximately 21,698 feet of diamond drilling was carried out on the property, principally directed on the No. 1 and No. 2 Zones. In the 1974 program, a total of 4,834 feet of 'AQ' (wireline) diamond drilling was completed in 19 holes, all but one of which were concentrated on the testing of the South Zone.

Interpretation of the diamond drilling results indicates that the South Zone is complex and consists of at least six subparallel narrow veins. Gold occurs on five veins (B, C, D, E and F) with only minor shearing evident. The No. 1 and No. 2 Zones are parallel (about 100 feet apart) shear zones and diamond drilling indicates they are continuous for a length of about 600 feet. In contrast to the South Zone, gold on the No. 1 and 2 Zones exist in well defined shoots with a steep northerly rake.

Drill results indicate that gold may terminate at a depth of about 400 feet in the No. 1 Zone and exists to a depth of 380 feet in the No. 2 Zone, the deepest level to which the mineralized shoot has been drilled. Diamond drilling of the South Zone is incomplete. Drill-indicated reserves for the No. 1 and No. 2 Zones have been recalculated using a lower minimum grade. Only the 'B' and 'C' veins of the South Zone have been taken into consideration in calculating the drill-indicated reserves.

Drill-indicated reserves for the No. 1 and No. 2 Zones and the 'B' and 'C' veins of the South Zone total 43,750 tons averaging 0.46 ounce of gold per ton. In these calculations, mining width is calculated by adding 1.0 feet (at assay grade) to the true width of the intersection and minimum mining width is 4.0 feet. Grade of blocks containing high gold values are cut to 1.5 times the average grade of the zone or vein, a procedure used to calculate reserves within developed portions of two producing mines in the district. Single drill intersections in the 'D', 'E' and 'F' veins of the South Zone were not considered in calculating the reserves. The Company's firm of consultants recommended that underground exploration of these three known

main zones be undertaken to determine grade, tonnage and ground conditions as a more positive approach, particularly with respect to the complex South Zone.

A feasibility study was carried out by Bacon & Crowhurst Ltd., consulting engineers, to consider the most economical and flexible method of underground access to the more favourable zones. These studies concluded the most appropriate design would involve a long decline (with branches) at a 15% grade for a total decline distance of 3,889 feet. The estimated cost of this program on a current pricing basis is $1,151,730 and does not include any provision for underground diamond drilling.

The Company does not have any immediate plans to fund this recommended underground program. However, with the sharp and sustained rise in world gold prices and the probability that this advance will continue to appreciably higher levels during 1975-1976, the project will receive consideration at the appropriate time and gold price.

Anglo United's working capital at October 31, 1974 amounted to $286,026. This is exclusive of investments consisting of 246,333 shares of Northgate held by Anglo United and its wholly owned investment subsidiary.

At December 31, 1974 Northgate's interest in Anglo United was 1,089,500 shares equal to approximately 17% of the issued and outstanding capital.

WESTFIELD MINERALS LIMITED

Both directly, and indirectly through affiliated companies, Westfield has widespread exploration interests in Canada, Australia and the Republic of Ireland. In addition, through its shareholdings in Vestgron Mines Limited and Northgate Exploration Limited, Westfield is participating in base metal mining operations in West Greenland and Ireland.

Other principal assets of Westfield include the Coniaurum Property in the Timmins district of Ontario which is, in part, leased to Pamour Porcupine Mines, Limited under a mining and royalty arrangement.

Coniaurum Property

Westfield owns the mineral rights and part of the surface rights of the former gold producing Coniaurum Property adjoining the Schumacher Mine (a Division of Pamour Porcupine Mines, Limited) in Tisdale Twp., Ontario. The Schumacher Mine with its milling facilities currently treating approximately 2,000 tons of copper ore and 600 tons of gold ore per day, was purchased from McIntyre by Pamour in late 1973.

Under the existing arrangements, a number of claims comprising about half of Westfield's Coniaurum Property are leased under a mining and royalty arrangement to

*This view of the Black Angel Mine in West Greenland of Greenex A/S, the wholly owned subsidiary of **Vestgron Mines Limited**, shows the concentrate storage building at the left and the conveyorway to the shiploader.*

Pamour. While these arrangements cover the mining of essentially copper ore with accompanying modest payable quantities of gold, there is a provision more specifically related to the mining of gold ore which is under consideration. During 1974, Westfield received $57,764 in royalty payments from Pamour which was derived from the mining of approximately 80,000 tons of copper ore from the Coniaurum Property. Royalty income was below expectation due to the lower than anticipated tonnage of ore mined during the year.

There are two principal zones contained within the leased area of the Coniaurum Property, designated as the "Main Copper Zone" and the "East Copper Zone". The "Main Copper Zone" is entirely within the Pearl Lake Porphyry extending between the 3125′ level and down to or near the 4625′ level. The "East Copper Zone" has been approximately outlined between the 3625′ and the 4025′ level horizons and is apparently contained entirely within the volcanics on the east nose of the Pearl Lake Porphyry.

Westfield reported that the reserves in the "Main Copper Zone" of the Coniaurum Property at December 31, 1973, were estimated at 1,150,000 tons with an average diluted grade of 0.60% copper and 0.04 oz. of gold per ton and estimated additional probable reserves totalling 330,000 tons grading 0.59% copper and 0.05 oz. of gold. Insufficient work has been done to date for the calculation of a reserve tonnage for the "East Copper Zone" but Westfield's consultant stated that on the basis of then current and former drilling, the tonnage between the 3625′ and the 4025′ level horizons is possibly 2,000,000 tons grading 0.65% copper and 0.03 oz. of gold per ton.

The royalty income from the mining of the foregoing copper reserves is greatly influenced by the copper prices prevailing at the time of extraction.

General Exploration

In addition to its widespread exposure to exploration through affiliated companies, Westfield continues active on its own account. During the summer of 1974 Westfield participated in a joint venture involving a nickel-copper prospect in Saskatchewan where a program of geochemical sampling and geological mapping was carried out. This work failed to define any targets suitable for follow-up test by diamond drilling and the project was terminated.

Westfield also entered into a joint venture undertaking with Northgate Exploration Limited in the Maritime provinces involving tracts in Nova Scotia covering approximately 140 square miles in 22 areas generally within a Carboniferous sedimentary environment. As a result of work carried out since April of 1974, the ground held was reduced to approximately 70 square miles at the year end. Several geochemical and geophysical anomalies have been located are scheduled for test by diamond drilling during the 1975 field season. This joint venture also encompassed reconnaissance exploration in Newfoundland and agreement in principle has been reached with Reid Newfoundland Corporation to explore approximately 600 square miles of ground held by that company. Westfield has a 60% participating interest in this joint venture.

Westfield also entered into a joint venture undertaking with Northgate involving an offshore gold placer prospect in Alaska where drilling had been scheduled for early 1975, but owing to unsatisfactory ice conditions this work had to be postponed. The rights under this phase of the project have been extended for one year. Negotiations on joint exploration of adjacent onshore and offshore areas are being continued with a view to carrying out exploration on the onshore areas during the summer of 1975.

Westfield's expenses for exploration in 1974 amounted to $104,278. An enlarged program and budget is projected for 1975.

Investments

As a result of transactions approved by Westfield's shareholders at its 1974 Annual and Special General Meeting whereby Westfield sold certain of its Whim Creek and Vestgron shares to Northgate for a total consideration of $4,350,000 payable by the issue to Westfield of 800,000 treasury shares of Northgate and $350,000 in cash, Westfield principal investments now consist of the following:

> 936,619 shares of 13.8% of Northgate Exploration Limited, 414,510 shares or 9.8% of Vestgron Mines Limited and 2,500,000 or 22.7% of Whim Creek Consolidated N.L. The combined quoted market value of these investments at December 31, 1974 was approximately $7.5 million.

Reference is made to the appended corporate profile for current information with respect to Whim Creek Consolidated N.L. and to the brief data contained on page 11 of this report regarding Vestgron Mines Limited.

Westfield's working capital at December 31, 1974 was $1,002,654 compared with $435,202 at the 1973 year end. A substantial portion of this increase in working capital is attributable to dividend income received from the Company's Northgate shareholding and a further appreciable increment will be realized from this source during 1975.

At December 31, 1974 Northgate's interest in Westfield Minerals Limited was 2,803,075 shares equal to approximately 45% of the issued and outstanding capital.

WHIM CREEK CONSOLIDATED N.L.

The activities of Whim Creek and its subsidiary companies continue dominantly in Western Australia (principally in the West Pilbara region) although in terms of the number of properties examined an appreciable amount of exploration was also carried out in Queensland and New South Wales in the eastern half of Australia.

Exploration expenditures during 1974 amounted to Aust. $383,529 and working capital at December 31, 1974 was Aust. $1,566,681. The major portion of working capital consists of cash including short term investments. The current currency exchange rate for the Australian dollar is approximately $1.36 Canadian.

As previously announced by Whim Creek, a decision had been made to commence comprehensive studies on the feasibility of a mining operation or operations on the Whim

Creek, Whundo and Mt. Sholl properties in West Pilbara. An appreciable portion of the exploration expenditures during 1974 were in connection with these feasibility studies. It is noted that the decision to proceed with these studies was made at a time when metal prices, particularly those for copper, were significantly higher than the prices prevailing during the latter part of 1974.

The following is a brief review of the results of the feasibility studies for each of the properties:

Whim Creek Mine

The study of the Whim Creek copper deposit was essentially completed in late 1974. It showed that an operation by open pit mining with processing by heap and agitation leaching for the oxide and mixed oxide sulphide ores was technically feasible. A more limited test was carried out on the flotation characteristics of the sulphide ore with satisfactory results.

Following some additional fill-in drilling, reserves extractable by open pit mining were calculated at 1,500,000 short tons grading an average of 2.31% copper with cut-off grades varying from 0.3% to 1.0% copper. Using a lower cut-off grade of 0.3%, the reserves are estimated at 2,800,000 tons averaging 1.62% copper.

Under present economic conditions, notably the prevailing copper prices, the Company noted it would be imprudent to proceed with production. However, the technical results are sufficiently encouraging to justify a continuation of investigations on process modification which might allow reductions in capital requirements and/or operating costs.

Mt. Sholl

Early in 1974 a study was commenced to establish a more quantitative understanding of the minimum tonnage and grade requirements for a profitable mining operation in the Roebourne-Dampier area based on the Mt. Sholl type copper-nickel mineralization. It was felt that such a study was necessary to provide a firm basis for decision on future exploration.

The study took the form of a preliminary feasibility investigation of mining and treating the Mt. Sholl B2 deposit in conjunction with a detailed review of the exploration potential of all of the Company's properties with similar mineralization and/or geological setting in the Roebourne — Dampier area. Reserves of mineralization at the Mt. Sholl B2 deposit suitable for open pit extraction were recalculated and simple metallurgical tests were carried out on core samples.

The possible reserve outlined to date by drilling at Mt. Sholl B2 was estimated at 4,400,000 tons averaging 0.60% copper and 0.50% nickel at a cut-off grade of 0.50% copper-nickel combined.

It was concluded that while an operation based on the B2 deposit alone would not be economically feasible, the engineering and financial study showed that with the addition of one or two deposits of similar nature a mining operation could be feasible. The possibilities for discovery of such additional deposits are reasonable as there are six areas held by the Company with similar geological and geophysical characteristics to the B2 area in the district and drilling on four of these has shown that copper-nickel mineralization is present although the tonnage and grade potential has not yet been determined.

Whundo Properties

The main Whundo property is a joint venture in which Whim Creek now holds an approximate 90% interest.

Preliminary studies to provide guide lines for further exploration on the Whundo properties, including the Whundo Joint Venture property, were undertaken during the year. One study was designed to examine the economics of a small operation based on high grade secondary copper sulphides, and a second study to consider the economics of a larger scale operation based on the copper-zinc deposit as a whole. The latter study was commenced in the second half of 1974.

The best known higher grade ore shoots were re-drilled at closer spacing and reserves of both high and low grade material were re-calculated in terms of mineralization suitable for open pit mining methods. The higher grade ore shoots were calculated to contain an estimated 54,000 tons grading slightly above 11% copper using a cut-off grade at 5.0% copper. It was apparent from preliminary calculations that a small but profitable cash flow operation on the high grade mineralization would be possible even at current low copper prices. Additional close drilling of some other high grade secondary sulphide shoots is planned for 1975 which could increase the reserves of high grade ore.

Consideration of the economics of a larger scale operation based on the copper-zinc deposit as a whole (including the lower grade mineralization) is still in progress. The re-calculated reserves on the latter basis are estimated at 1,300,000 tons averaging 2.08% copper and 1.33% zinc. A cut-off grade of 0.5% copper was used for the lower grade material which constitutes the bulk of this tonnage consisting of low grade chalcocite, oxides and sulphides.

Two possibilities exist on Company held properties in reasonable proximity to the Whundo Joint Venture claims for the discovery of similar copper-zinc mineralization. On the Whundo property itself there is a potential for discovery of more ore as two of the three known sulphide shoots are still open at depth. Evidence of similar mineralization is known from three prospects some distance away on what appears to be the same favourable geological horizon. Investigation of these possibilities will continue in 1975.

It is indicated that with additional deposits of similar grade and tonnage together with improved metal prices economic operations could be possible.

It is noted that the reserves for the foregoing properties are higher than those previously reported at December 31, 1973. With respect to the Whim Creek and Whundo properties, the increases are based on additional drilling. The increase in the Mt. Sholl reserves is a result of re-calculation.

Mons Cupri Properties

Information regarding the Mons Cupri properties which are under option to Australian Inland Exploration Inc. (wholly owned subsidiary of Texasgulf) is substantially unchanged from that reported at year end 1973. The following is an excerpt from the manager's report of Australian Inland for the period ended December 31, 1974:

> "Feasibility studies on the Mons Cupri base metal deposit have been directed toward establishing the viability of an acid leaching operation on the secondary copper ore. Heap leaching is the main processing method being evaluated."

Whim Creek holds a non-contributing interest in the Mons Cupri properties amounting to 31⅔%, the remainder held by Australian Inland.

General Exploration

Whim Creek's basic program for the location and development of new projects continued with approximately equal emphasis placed on the search for copper-nickel sulphides in association with ultrabasic and differentiated basic rocks and copper-zinc deposits in the acid volcanic environment. Two new prospects were acquired by staking, Mt. Kilkenny copper-nickel and Belfrey copper-gold. These will be subject to more systematic work in 1975.

Exploration continued during the period in northern New South Wales and Queensland. Preliminary exploration was conducted on eight separate properties, four of which were subsequently tested by drilling. Only one property, the Bedford copper-gold prospect, has shown sufficient promise to justify further exploration. On this prospect, owing to difficult drilling conditions, only one percussion hole penetrated through the oxidized zone. This hole intersected approximately 46 feet of primary sulphides consisting of 26.3 feet of 2.4% copper and 19.7 feet of 1.36% copper.

Whim Creek group property holdings at December 31, 1974 totalled about 86,000 acres compared with approximately 115,000 acres at June 30, 1973.

At December 31, 1974 Northgate's direct interest in Whim Creek Consolidated was 3,500,000 shares equal to approximately 32% of the issued and outstanding capital.

Northgate Exploration Limited
(Incorporated under the laws of Ontario)
and its wholly owned subsidiary companies

Consolidated Balance Sheets — *December 31, 1974 and 1973*

Expressed in Canadian dollars

ASSETS

Current Assets
Cash, including short term securities and deposits
Smelter settlements outstanding at estimated net realizable value
Concentrates and metal on hand (note 1(c))
Supplies at cost
Accounts receivable and prepaid expenses

Investments in Associated and Other Companies
Associated companies
Shares (notes 1(a)(ii) and 2)
Advances
Other listed shares at cost less amounts written off (quoted market value, 1974, $10,813,000; 1973, $11,686,000) (note 3)
Other shares, advances and participations at cost less amounts written off

Less provision for decline in value

Fixed Assets
Buildings, machinery and equipment at cost
Land in Ireland at cost
Mining claims in Canada at nominal value

Less accumulated depreciation (note 1(d))

Other Assets and Deferred Charges (note 1(d) and (e)
Cash deposited as collateral for guarantee (note 6)
Preproduction expenditures less amortization
Underground development expenditures less amortization
Other deferred charges

LIABILITIES AND SHAREHOLDERS' EQUITY

Current Liabilities
Bank advances
Accounts payable and accrued liabilities
Government royalty payable
Income taxes payable

Future and Deferred Income Taxes (note 5)

Shareholders' Equity
Capital stock (note 4)
Authorized — 10,000,000 shares of $1 each
Issued — 6,891,699 shares (1973, 5,992,549 shares)
Contributed surplus
Retained earnings

Approved by the Board M. K. PICKARD, Director W. F. JAMES, Director

See accompanying notes

	1974	1973
	$11,804,000	$ 2,567,000
	4,126,000	8,072,000
	2,902,000	3,540,000
	1,844,000	1,412,000
	743,000	635,000
	21,419,000	16,226,000
	5,900,000	4,930,000
	424,000	424,000
	16,942,000	13,864,000
	378,000	621,000
	23,644,000	19,839,000
	1,250,000	1,250,000
	22,394,000	18,589,000
	22,038,000	21,433,000
	1,194,000	1,040,000
	1,000	1,000
	23,233,000	22,474,000
	15,131,000	12,332,000
	8,102,000	10,142,000
	2,724,000	
	131,000	471,000
	2,977,000	3,757,000
	34,000	161,000
	5,866,000	4,389,000
	$57,781,000	$49,346,000

	1974	1973
	$ 251,000	$ 479,000
	3,346,000	2,351,000
	1,005,000	1,253,000
	309,000	186,000
	4,911,000	4,269,000
	3,265,000	
	6,892,000	5,993,000
	6,849,000	3,187,000
	35,864,000	35,897,000
	49,605,000	45,077,000
	$57,781,000	$49,346,000

Auditors' Report

To the Shareholders of
Northgate Exploration Limited

We have examined the consolidated balance sheet of Northgate Exploration Limited and its wholly owned subsidiary companies as at December 31, 1974 and 1973 and the consolidated statements of income, retained earnings, contributed surplus and changes in financial position for the years then ended. Our examination of the financial statements of Northgate Exploration Limited (the parent company) included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances. With respect to the subsidiary companies of which we are not the auditors, we have carried out such enquiries and examinations as we considered necessary in order to rely for purposes of consolidation on the reports of their auditors.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1974 and 1973 and the results of their operations and the changes in their financial position for the years then ended, in accordance with generally accepted accounting principles applied on a consistent basis.

THORNE GUNN & CO.
Chartered Accountants

Toronto, Canada
February 7, 1975

Consolidated Statement of Income

YEARS ENDED DECEMBER 31, 1974 and 1973

Expressed in Canadian dollars

	1974	1973
Revenue		
Metals and metal concentrates	$40,184,000	$42,816,000
Deduct shipping, smelting and marketing expenses	14,239,000	14,700,000
	25,945,000	28,116,000
Operating expenses		
Operating expenses other than items set out below	12,771,000	11,080,000
Administrative and general expenses	1,543,000	1,564,000
Government royalty	911,000	1,171,000
Depreciation (note 1(d))	3,083,000	2,797,000
Amortization of preproduction and other expenditures (note 1(d))	1,172,000	1,373,000
	19,480,000	17,985,000
	6,465,000	10,131,000
Exploration (note 1(e))	594,000	526,000
	5,871,000	9,605,000
Equity in income (loss) of associated companies (notes 1(a)(ii) and 2)	(80,000)	78,000
Interest, dividends and profits on sale of investments	1,635,000	337,000
Income before income taxes and extraordinary item	7,426,000	10,020,000
Income taxes (note 5)	3,400,000	
Income before extraordinary item	4,026,000	10,020,000
Provision for decline in value of investments		900,000
Net income for the year (note 5)	$ 4,026,000	$ 9,120,000
Earnings per share (on weighted average basis)		
Income before extraordinary item	$0.61	$1.67
Provision for decline in value of investments		(0.15)
Net income for the year	$0.61	$1.52

Consolidated Statement of Retained Earnings

YEARS ENDED DECEMBER 31, 1974 and 1973
Expressed in Canadian dollars

	1974	1973
Balance at beginning of year	$35,897,000	$26,777,000
Net income for the year	4,026,000	9,120,000
	39,923,000	35,897,000
Dividends paid — U.S. 65¢ per share	4,059,000	
Balance at end of year	$35,864,000	$35,897,000

Consolidated Statement of Contributed Surplus

YEARS ENDED DECEMBER 31, 1974 and 1973
Expressed in Canadian dollars

	1974	1973
Balance at beginning of year	$ 3,187,000	$ 3,137,000
Premium on shares issued during the year		
Stock option plan (note 4(a))	462,000	50,000
Investments (note 4(b))	3,200,000	
Balance at end of year	$ 6,849,000	$ 3,187,000

Consolidated Statement of Changes in Financial Position

YEARS ENDED DECEMBER 31, 1974 and 1973
Expressed in Canadian dollars

	1974	1973
Working capital derived from		
Operations	$11,626,000	$14,112,000
Shares issued under the company's Stock Option Plan	561,000	61,000
Shares issued in consideration for investments	4,000,000	
Other items	318,000	216,000
	16,505,000	14,389,000
Working capital applied to		
Investments	4,128,000	7,401,000
Additions to fixed assets (net)	1,043,000	739,000
Dividends paid	4,059,000	
Cash deposited as collateral for guarantee	2,724,000	
	11,954,000	8,140,000
Increase in working capital	4,551,000	6,249,000
Working capital at beginning of year	11,957,000	5,708,000
Working capital at end of year	$16,508,000	$11,957,000

Notes to Consolidated Financial Statements

YEARS ENDED DECEMBER 31, 1974 and 1973
Expressed in Canadian dollars

1. Summary of Significant Accounting Policies

(a) Principles of consolidation

(i) The consolidated financial statements include the accounts of all wholly owned subsidiary companies; the more significant subsidiaries are:
Irish Base Metals Limited
Gortdrum Mines (Ireland) Limited
Powertrack Mining Limited

(ii) The company accounts for its investment in associated companies on the equity basis. Under the equity basis, the company's equity in the net income or loss of the associated companies is reflected in the statement of income and an adjustment is made to the value at which the investment is carried in the balance sheet (note 2).

(b) Currency conversion

Currency balances other than in Canadian dollars have been converted to Canadian dollars as follows:

(i) Smelter settlements outstanding and concentrates and metal on hand at rates of exchange estimated at time of settlement.

(ii) Other current assets and liabilities at rates of exchange which approximate the rates at December 31, 1974 and 1973.

(iii) Other assets and deferred charges, and the related depreciation and amortization charged to income, at approximate rates prevailing when funds for the expenditures were provided.

(iv) Other operating accounts have been converted at the average rate of exchange prevailing during each year.

(c) Concentrates and metal on hand

Concentrates and metal on hand, in accordance with accounting practices established in prior years, have been valued as follows:

	1974	1973
Irish Base Metals Limited, at estimated net realizable value ...	$1,595,000	$2,356,000
Gortdrum Mines (Ireland) Limited, at the lower of cost and estimated net realizable value	1,307,000	1,184,000
	$2,902,000	$3,540,000

(d) Depreciation and amortization

Depreciation of fixed assets has been recorded at various rates to charge the cost to income over the shorter of the expected useful lives of the assets or the life of the estimated ore reserves.

Preproduction expenditures are being amortized over the estimated lives of the open pit mines and underground development expenditures are being amortized over the estimated life of the underground mine.

The amounts by which the cost of shares in consolidated subsidiary companies exceeds the related book value of underlying net assets are being amortized over the estimated life of the Gortdrum Mine. The unamortized balances are included in other deferred charges.

(e) Exploration

The company and consolidated subsidiaries charge exploration expenditures to income in the period in which incurred. Non-producing associated mining companies defer exploration and administrative expenditures as set out in note 2. Development costs are deferred and amortized by charges to future income.

2. Associated Companies

	1974		1973	
	% of shares outstanding	Carrying values	% of shares outstanding	Carrying value
The investment in shares of associated companies is carried on the equity basis				
Westfield Minerals Limited	45%	$3,425,000	45%	$3,348,000
Whim Creek Consolidated N.L. (note 4(b))	32%	1,538,000	20%	645,000
Anglo United Development Corporation Limited ...	17%	624,000	17%	624,000
Smelter Corporation of Ireland Limited	70%	313,000	70%	313,000
		$5,900,000		$4,930,000

The company's equity in the underlying net book values of associated companies is reconciled to the carrying value on the equity basis of the investment as follows:

	1974	1973
Equity in underlying net tangible assets	$2,686,000	$2,394,000
Equity in underlying deferred exploration and administrative expenditures	1,795,000	1,536,000
Excess of cost of investment over underlying net book values — attributed to mineral interests	1,521,000	1,022,000
Equity in earnings (losses) since acquisition	(102,000)	(22,000)
Carrying value on equity basis	$5,900,000	$4,930,000

The associated companies in the mineral exploration business have deferred exploration and administrative expenditures with the intention that they should be amortized by charges against income from future mining operations. The company would also amortize, by charges against its interest in such income, the excess of cost of investment over underlying net book values. The recovery of these costs from operations is dependent, therefore, upon the discovery of sufficient ore and the development by the associated companies of economic mining operations.

The quoted market value of the shares in Westfield Minerals, Whim Creek and Anglo United Development amounted to $3,229,000 at December 31, 1974 and $4,985,000 at December 31, 1973. However, because of the number of shares held, the quoted market value is not necessarily indicative of their realizable value. Smelter Corporation of Ireland Limited is a private company with no quoted market value for its shares.

3. OTHER LISTED SHARES

Other listed shares include an investment in 630,441 shares of Tara Exploration and Development Company Limited carried in the accounts at a cost of $9,205,000, representing 9.8% of the shares outstanding at December 31, 1974 and 1973. Because of the number of shares held, the quoted market value of $8,904,000 at December 31, 1974 ($7,881,000 at December 31, 1973) is not necessarily indicative of their realizable value.

Tara and the Irish Government's Minister for Industry and Commerce signed an agreement in February, 1975 with respect to the terms of a State mining lease for Tara's zinc/lead property near Navan, County Meath, Ireland. The agreement provides for the issuance of a lease to Tara's wholly-owned subsidiary, Tara Mines Limited. The principal financial terms of the lease will be:

(a) a free 25% equity participation by the Minister in Tara Mines Limited; and

(b) a royalty equal to 4.5% of profits (in addition, the Company will be subject to normal corporate income taxes of approximately 50%).

The Minister and Tara have agreed to finalize details of the State mining lease as soon as possible to facilitate completion of senior financing and the recommencement of work at the Navan project.

4. Capital Stock

(a) Stock option plan

Pursuant to the Officers' and Employees' Stock Option Plan, options may be granted until June 3, 1979 on up to 300,000 shares of the company's capital stock at prices not less than 90% of the closing price for the company's shares on The Toronto Stock Exchange on the dates the options are granted.

Outstanding at December 31, 1974 are options granted in 1972 on 95,000 shares at $5.76 per share, exercisable 47,500 shares to April 30, 1975 and 47,500 shares to April 30, 1976 and options granted in 1973 on 4,300 shares at $5.54 per share, exercisable 2,200 shares to May 6, 1975 and 2,100 shares to May 6, 1976 and options granted in 1974 on 59,300 shares at $4.73 per share, exercisable to May 25, 1975.

During 1974, 99,150 shares were issued for $561,000 cash on exercise of stock options (1973, 10,750 shares for $61,000).

(b) Share issue

On May 9, 1974 Northgate purchased from Westfield Minerals 220,000 shares of Vestgron Mines and 1,250,000 shares of Whim Creek in consideration for $350,000 cash and 800,000 shares of Northgate Exploration.

5. Income Taxes

Under the provisions of the Finance (Taxation of Profits of Certain Mines) Act 1974, which became law on July 13, 1974, the Irish Government withdrew effective April 1974, the consolidated Irish subsidiary companies exemption from Irish income taxes in respect of their income from mining operations. The Act requires a determination of income taxes for 1974 and future years at a current rate of approximately 50% but a portion of these taxes will be deferred and not payable on a current basis because of allowances for depreciation and amortization on bases which differ from those used for accounting purposes.

The consolidated Irish subsidiary companies' income from sources other than mining operations has been and continues to be subject to tax at full rates which currently approximate 50%.

Dividends from the consolidated subsidiary companies are not subject to Irish withholding tax or Canadian income taxes.

Taxes deferred by capital cost allowances	$1,203,000
Taxes payable in the first quarter 1976	2,062,000
Future and deferred income taxes	3,265,000
Taxes payable in 1975	135,000
Total 1974 income taxes	$3,400,000

6. Cash Deposited as Collateral for Guarantee

In August 1974 Northgate guaranteed an amount of U.S. $2,500,000 in respect of a loan granted to Tara Mines Limited by Tara's bankers. This is part of a larger loan in the aggregate amount of U.S. $7,500,000 granted to Tara.

7. Other Statutory Information

Remuneration of the company's directors and senior officers (as defined by The Business Corporations Act of Ontario) amounted to $397,000 for 1974 and $329,000 for 1973.

The pictures alongside depict on the on-going programs of environmental control, improvements and conservation measures at the Tynagh Mine. Upper photograph shows the hydraulic fertilizing and seeding of contoured former waste dumps and below is the resultant growth of grasses and legumes.

Northgate Exploration Limited

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Irish Base Metals Limited

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D. H. B. FitzGerald

Gortdrum Mines (Ireland) Limited

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Secretary

MINE MANAGER

Derick Morris

Management Comment and Analysis of Financial Statistics

It is recognized that the financial results from the mining of essentially base metals is heavily influenced by cyclical factors involving frequent and often wide variations in metal prices. This is particularly applicable to copper prices which have a history of volatile price variations in sensitive response to short term changes in supply and demand. Silver, which is a by-product of both of Northgate's Irish subsidiary mining companies, is similarly subject to wide price fluctuations despite the general uptrend during recent years.

Smelter settlements with respect to metal concentrates produced by Northgate's subsidiary mining companies are based on London Metal Exchange quotations for lead, copper and silver, and the G. O. B. European Producer price for zinc.

It is noted that most base metal prices have shown year to year increases in almost direct proportion to the worldwide inflationary trends. However, these price increases for base metals have been virtually paralleled by the escalation of costs of mining. For these fundamental reasons, profit margins are more accurately related to the tonnage and grade of ore mined and the resultant quantities of concentrates produced.

In the case of the Tynagh Mine, concentrate production during the 1970 to 1972 period reflected the mining of higher grade ore from the open pit. In 1973 concentrate production was based on ore mined from both the open pit and from the underground reserves, the latter being significantly lower in metal content than the secondary and primary ores obtained from the open pit. In 1974 and onward, total ore extraction is from the underground reserves of this lower grade ore with related lower concentrate production and higher mining and treatment costs.

The presence of mercury in certain and substantial portions of the basically copper ores of the Gortdrum Mine necessitated the construction in 1969 of an auxiliary mercury roaster extraction plant to reduce the mercury content in concentrates to levels acceptable by the smelter firms. The costs of recovering the mercury has in recent years exceeded the value obtained in selling this metal.

Over the period since the commencement of operations, the Gortdrum Mine has not proved particularly profitable. In 1972 there was a net loss of $879,000; in 1973 a net profit of $1,324,000; and in 1974 a profit (after taxes) of $358,385. The Gortdrum Mine, which is scheduled to cease operations in 1975, is not expected to provide any significant contribution to Northgate's consolidated net income in this year.

Consolidated Financial Results

The increase in net smelter revenue from $16,715,000 in 1972 to $28,116,000 in 1973 was substantially attributable to the substantial increase in prices received for metals in concentrates produced. The reduction in net smelter revenue in 1974, in spite of the unusually buoyant metal prices, was due to a shortfall in the production of saleable concentrates.

Consolidated net income in 1973 of $9,120,000 was the highest recorded since 1969 and contrasts sharply with the net profit in 1972 of $3,094,000 and a net loss in 1971 of $1,353,000. The decrease in net income for 1974 is attributable to the aforementioned shortfall in concentrate production, sales, generally higher operating costs, but most importantly, to the imposition of Irish income taxes, effective from April 1974, on profits derived from mining operations. Under the provisions of the "Finance (Taxation of Profits of Certain Mines) Act, 1974" the Irish Government withdrew the existing exemption from Irish income taxes for income from mining operations. The provision for income taxes in 1974 amounted to $3,400,000 to show a net after tax of $4,026,000.

It is noted that in 1974 there was an increment to net income of $1,635,000 representing non-operating revenue derived from interest, dividends and profit on the sale of investments. The corresponding item in 1973 was $337,000. Additionally, in 1973 there was an extraordinary item consisting of a provision for the decline in the value of investments amounting to $900,000 which was deducted from ordinary profits for the resulting net income. There was no such item in 1974.

The per share net income figure for 1974 was influenced by the increase in the weighted average number of shares outstanding during 1974 of 6,605,739 compared with 5,992,549 shares in 1973.

Price Range of Common Shares and Dividend Payments

The following table indicates the high and low closing prices for Northgate Common shares on The Toronto Stock Exchange (the principal trading market for Northgate shares) for the periods indicated, as reported by The Toronto Stock Exchange. Also shown are the per share dividend payments made in the respective periods.

		High	Low	Dividend
1973	1st Quarter	$6.35	$4.65	—
	2nd Quarter	6.60	4.75	—
	3rd Quarter	6.75	4.50	—
	4th Quarter	5.20	3.95	—
1974	1st Quarter	8.62	4.60	—
	2nd Quarter	7.00	4.80	US$0.40
	3rd Quarter	6.75	3.60	—
	4th Quarter	4.15	2.50	US$0.25

FIVE YEAR COMPARAT

(expressed in thousands of Canadian dollars un

Revenue — metals and metal concentrates
Operating expenses
Depreciation and amortization
Government royalty
Exploration
Interest on long term debt and amortization of deb discount and expenses
Equity in income (loss) of associated companies
Interest, dividends and profit on sale of investme
Income before income taxes and extraordinary it
Income taxes
Income before extraordinary item
Provision for decline in value of investments
Net income (loss) for the year
Earnings (loss) per share
Income before extraordinary item
Extraordinary item
Net income (loss) for the year
Number of shares used in computing earnings per share

YEAR END FINANCIAL HIGHLIGHTS
(expressed in thousands of Canadian dollars unless otherwise indicated)

Working capital
Investments in affiliated and other companies (n
Fixed assets (net)
Other assets and deferred charges
Cash deposited as collateral
Total invested capital
Long term debt
Future and deferred income taxes
Shareholders' equity
Shares outstanding
Share price high/low (during the year)

FIVE YEAR COMPARATIVE SUMMARY OF PRODUCTION HIGHLIGHTS

Tons ore mined
Tons ore preconcentrated
Tons ore treated in concentrator
Concentrate Production
Lead
Zinc
Bulk
Copper
Totals
Tons treated in concentrator
Tons of concentrates produced
Tons of roasted concentrates produced
Flasks of mercury recovered
Tons of concentrates sold
Flasks of mercury sold

SUMMARY OF HIGHLIGHTS

wise indicated)	1974	1973	1972	1971	1970
	$25,945	$28,116	$16,715	$13,187	$19,646
....	14,314	12,644	9,429	8,774	8,318
....	4,255	4,170	3,675	4,111	3,476
....	911	1,171	263	61	834
....	594	526	422	1,081	979
....			191	274	379
	20,074	18,511	13,980	14,301	13,986
	5,871	9,605	2,735	(1,114)	5,660
....	(80)	78	33	(47)	(10)
....	1,635	337	326	358	1,458
....	7,426	10,020	3,094	(803)	7,108
....	3,400				
....	4,026	10,020	3,094	(803)	7,108
....		(900)		(550)	(850)
....	$ 4,026	$ 9,120	$ 3,094	$(1,353)	$ 6,258
....	$0.61	$1.67	$.51	$(.13)	$1.19
....		(0.15)		(.09)	(.14)
....	$0.61	$1.52	$.51	$(.22)	$1.05
....	6,605,739	5,992,549	5,981,799	5,981,799	5,981,799

	1974	1973	1972	1971	1970
....	$16,508	$11,957	$ 5,708	$ 128	$ 6,521
....	22,394	18,589	12,010	11,660	11,201
....	8,102	10,142	12,200	11,158	11,430
....	3,142	4,389	5,978	9,856	8,535
....	2,724				
....	52,870	45,077	35,896	32,802	37,687
....					2,022
....	3,265				
....	49,605	45,077	35,896	32,935	35,665
....	6,891,699	5,992,549	5,981,799	5,981,799	5,981,799
	$8.62/2.50	$6.75/3.95	$6.90/4.30	$11.25/4.35	$18.38/7.90

	TYNAGH				
....	667,119	682,734	661,312	675,781	697,643
....	667,119	533,026	239,090		
....	490,356	529,417	422,222	675,781	687,643
....	38,084	74,400	57,828	53,932	92,759
....	42,511	22,807	35,872	43,779	22,051
....	4,849	14,363	39,100	52,905	29,683
....	7,038				
....	92,482	111,570	132,800	150,616	144,493
	GORTDRUM MINE				
....	491,382	330,226	401,635	536,638	510,636
....	13,288	7,106	11,590	12,949	13,681
....	6,369	7,803	10,869	12,394	9,818
....	775	1,345	1,250	2,345	1,304
....	12,112	13,970	13,332	12,661	9,550
....	908	1,300	1,308	2,232	1,610

NOTE: Refer to notes to consolidated financial statements for additional information.


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